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Patent Department  
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New York, NY 10036-2787

EXAMINER
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MCEVOY, THOMAS M

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/380,519  
Filing Date: September 03, 1999  
Appellant(s): HORPPU ET AL.

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John M. Genova  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 27<sup>th</sup> 2011 appealing from the Office action mailed June 17<sup>th</sup> 2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

1, 2, 5-9, 15 and 16

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

### **NEW GROUND(S) OF REJECTION**

A new grounds of rejection is presented below. Even though the rejection relies on the same two references used in the previous office action, the thrust of the rejection is altered sufficiently to warrant its assignment as new grounds.

**Claims 1, 2, 5-9, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US 4,548,201) in view of Clark et al. (US 5,643,290) (Yoon in view of Clark et al. "B").**

It should be noted here that this new grounds of rejection (Yoon in view of Clark et al. "B") includes the same two references that were used in the rejection set forth in the final action of June 17, 2010 (Yoon in view of Clark et al. "A"). This new grounds is being set forth here to emphasize an alternative interpretation of the references that may have gone unnoticed during prosecution. Therefore, the claims are rejected here under two distinct grounds, Yoon in view of Clark et al. "A" and Yoon in view of Clark "B".

### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

### **(8) Evidence Relied Upon**

US 4,548,201

YOON

10-1985

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 1, 2, 5-9, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US 4,548,201) in view of Clark et al. (US 5,643,290) (Yoon in view of Clark et al. "A").**

**Regarding claim 1**, Yoon discloses a mounting apparatus for mounting an endless cord 10 which is expandable from a contracted condition to an expanded condition onto an end of a structure (cylinder B) having a transverse dimension greater than that of the cord when in the contracted condition, said apparatus comprising a tapered adaptor 100 for the cord to be propelled over onto the end of the structure having a forward smaller end for location in the cord in its contracted condition and a rear larger end for juxtaposing with the end of the structure (Figure 18), said apparatus further comprising an expander device (Figure 21A) movable relative to the adaptor to propel the cord over the adaptor onto the rear larger end thereof, wherein the adaptor comprises a plurality of circumferentially spaced-apart fingers (formed by channels 108) which extend from the rear larger end towards the forward smaller end and the expander device has a circumference and comprises a plurality of circumferentially spaced-apart arms and wherein the thickness of the arms of the expander device taper in a radial direction towards the center of the circumference (evident from Figure 21A – see cross-section at end of structure). Yoon discloses that the expander should provide even pushing force to the cord (col. 3, line 66 to col. 4, line 3). Yoon fails to disclose

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that the arms are insertable between the fingers of the adaptor. Clark et al. teach that it is advantageous to insert arms of an expander device between fingers of an adaptor to provide better alignment and loading of a cord (Abstract; col. 2, lines 42-46; col. 4, lines 18-20; col. 12, lines 42-50; col. 13, lines 17-25). It would have been obvious to one of ordinary skill in the art in view of Clark et al. and at the time of Appellant's invention to have made two of the arms of the Yoon expander insertable between fingers of the adaptor in order to better align the adaptor and expander and provide even pushing force to the cord. One of ordinary skill in the art would recognize several ways that this could be done; for example, by adapting the arms to the already formed channels (such as by providing projections similar to those on the cord or narrowing the inner diameter of the arms to match the channels, etc.) which are already intended for a very similar purpose (alignment of the clip with the intermediate cylinder B). One of ordinary skill in the art would also recognize that since the Yoon intends to prevent bending or damage of teeth/pins (18, 28, 38, etc.; col. 11, lines 15-26), the keyed alignment provided in view of Clark et al. would prevent rotation of the expander which could cause rotation of the teeth in channel 108.

**Regarding claim 2**, the expander device is operable in a first mode thereof to propel the cord over the adaptor on to the rear larger end thereof and in a second mode thereof to propel the cord from the rear larger end onto the end of the structure (col. 3, line 66 to col. 4, line 3 of Yoon).

**Regarding claim 5**, with the above modification, the adaptor and the expander device would be adapted to mesh with one another to propel the cord over the adaptor to the rear larger end thereof when modified in view of Clark et al. as explained above.

**Regarding claim 6**, Yoon discloses that the thickness of the circumferentially spaced-apart fingers of the adaptor taper in a radial direction towards the forward smaller end of the adaptor (col. 11, lines 47-53 of Yoon; this feature would read on the claim if the expander is modified to mate with channels in view of Clark et al. as explained above).

**Regarding claim 7**, the forward smaller end of the adaptor is presented by a central member 104 of Yoon.

**Regarding claim 8**, the central member and the fingers of the adaptor are connected to one another (Figure 18 of Yoon).

**Regarding claim 9**, the expander device includes a tubular section adapted to slide over the adaptor to propel the cord from the rear larger end thereof onto the end of the structure (for instance, the section directly above the 'Figure 21A' label).

**Regarding claim 15**, Yoon discloses providing the apparatus in a kit (col. 3, lines 28-30).

**Regarding claim 16**, the kit further comprises a surgical instrument 200 for ligating internal body tissue (Figure 23 of Yoon).

### **New Grounds of Rejection**

**Claims 1, 2, 5-9, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US 4,548,201) in view of Clark et al. (US 5,643,290) (Yoon in view of Clark et al. "B").**

**Regarding claim 1**, Yoon discloses a mounting apparatus for mounting an endless cord 10 which is expandable from a contracted condition to an expanded condition onto an end of a structure (cylinder B) having a transverse dimension greater than that of the cord when in the contracted condition, said apparatus comprising a tapered adaptor 100 for the cord to be propelled over onto the end of the structure having a forward smaller end for location in the cord in its contracted condition and a rear larger end for juxtaposing with the end of the structure (Figure 18), said apparatus further comprising an expander device (Figure 21A) movable relative to the adaptor to propel the cord over the adaptor onto the rear larger end thereof, wherein the adaptor comprises a plurality of circumferentially spaced-apart fingers (formed by channels 108 or as created in view of Clark et al. and explained below) which extend from the rear larger end towards the forward smaller end and the expander device has a circumference and comprises a plurality of circumferentially spaced-apart arms and wherein the thickness of the arms of the expander device taper in a radial direction towards the center of the circumference (evident from Figure 21A – see cross-section at end of structure). Yoon discloses that the expander should provide even pushing force to the cord (col. 3, line 66 to col. 4, line 3). Yoon fails to disclose that the arms are insertable between the fingers of the adaptor. Clark et al. teach that it is advantageous



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to insert arms of an expander device between fingers of an adaptor to provide better alignment and loading of a cord (Abstract; col. 2, lines 42-46; col. 4, lines 18-20; col. 12, lines 42-50; col. 13, lines 17-25). It would have been obvious to one of ordinary skill in the art in view of Clark et al. and at the time of Appellant's invention to have provided ribs on the underside of the arms of Yoon and slots on the adaptor in order to better align the adaptor and expander and provide even pushing force to the cord. One of ordinary skill in the art would also recognize that since the Yoon intends to prevent bending or damage of teeth/pins (18, 28, 38, etc.; col. 11, lines 15-26), the keyed alignment provided in view of Clark et al. would prevent rotation of the expander which could cause rotation of the teeth in channel 108. With this modification, the arms of the expander would have a portion (ribs) insertable between fingers (created by the slots) of the adaptor.

**Regarding claim 2**, the expander device is operable in a first mode thereof to propel the cord over the adaptor on to the rear larger end thereof and in a second mode thereof to propel the cord from the rear larger end onto the end of the structure (col. 3, line 66 to col. 4, line 3 of Yoon).

**Regarding claim 5**, with the above modification, the adaptor and the expander device would be adapted to mesh with one another to propel the cord over the adaptor to the rear larger end thereof when modified in view of Clark et al. as explained above.

**Regarding claim 6**, Yoon discloses that the thickness of the circumferentially spaced-apart fingers of the adaptor taper in a radial direction towards the forward

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smaller end of the adaptor (col. 11, lines 47-53 of Yoon; the fingers created by providing slots or channels on the adapter would have the claimed tapering).

**Regarding claim 7**, the forward smaller end of the adaptor is presented by a central member 104 of Yoon.

**Regarding claim 8**, the central member and the fingers of the adaptor are connected to one another (Figure 18 of Yoon).

**Regarding claim 9**, the expander device includes a tubular section adapted to slide over the adaptor to propel the cord from the rear larger end thereof onto the end of the structure (for instance, the section directly above the 'Figure 21A' label).

**Regarding claim 15**, Yoon discloses providing the apparatus in a kit (col. 3, lines 28-30).

**Regarding claim 16**, the kit further comprises a surgical instrument 200 for ligating internal body tissue (Figure 23 of Yoon).

#### **(10) Response to Argument**

Appellant has argued throughout pages 5-6 of the brief that the channels (e.g. 108 and 109) of Yoon are intended to protect the teeth/pins 18, 28 38 from damage and therefore they should be free of any structure that could bend, dislocate or interfere with their passage. It is not understood how a structure similar to the ribs of Clark et al. would cause damage to the teeth or pins. It is even questionable whether any contact with the teeth or pins could be made when inserting some portion of the Yoon expander into the channel 108 of Yoon. It is noted that the teeth and pins of Yoon are not delicate

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structures and are intended to penetrate any tissue (col. 3, lines 59-62). Furthermore, if one of ordinary skill in the art had such a concern, it would be a matter of basic mechanical understanding that the ribs or other structures could be set back from the end of the Yoon expander in order to prevent such damage. Yoon does disclose that the channels maintain the correct rotational alignment of the ring with the forceps (col. 13, lines 49-59). The similarity in structure and function between the devices of Yoon and Clark et al. would lead one of ordinary skill in the art to mutually apply their relevant teachings and combine their compatible features. Clark et al. clearly teach that a keyed alignment between a ring expander and ring adaptor is a beneficial feature. Clark et al. make clear that any inter-lockable combination of structures, such as ribs and grooves, are suitable for creating the keyed alignment (col. 4, lines 18-20; col. 12, lines 42-50). Clark et al. also disclose that only two ribs and respective slots are necessary (col. 13, lines 26-30); further suggesting that the two channels of Yoon would be appropriate for this teaching. One of ordinary skill in the art would recognize that since Yoon intends to prevent bending or damage of teeth/pins (col. 11, lines 15-26), the keyed alignment provided in view of Clark et al. would prevent rotation of the expander which could cause rotation of the teeth/pins in channel 108. Appellant has argued on page 6 of the brief that providing projections on the arms of Yoon which fit into channel 108 would result in fragile arms incapable of serving any guiding function. This argument appears to be purely conjecture and unsupported by any evidence. It is not understood how the arms would be made fragile as asserted. If it is not found persuasive that channel 108 of Yoon could be used to guide the expander, an alternate grounds of rejection, implied

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in the previous office action, has been presented above. Appellant has argued on pages 6 and 7 of the brief that certain embodiments of the Yoon expander are intended to rotate, therefore restricting the rotation of the Figure 21A expander would be improper. The rotation disclosed by Yoon in the embodiments and passages cited by Appellant is not rotation of the expander about its central axis. It is rotation of the posts relative to their joining pads. In col. 11, lines 52-53, Yoon states "The posts 132 of ring dilator are, in effect, articulated by the arcuate shape of their joining pads 136". Moreover, the expanders cited by Appellant are of a completely different structure than Figure 21A of Yoon which is relied upon in the above rejection.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR

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41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

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Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/T. M./

Examiner, Art Unit 3731

**A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:**

/ANGELA D. SYKES/

Director, Technology Center 3700

Conferees:

/S. Thomas Hughes/

Supervisory Patent Examiner, Art Unit 3731

/Michael J Milano/

Primary Examiner